

In re Application of WHITE et al.
Serial No. 10/033,177

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,819,092 to Ferguson et al. ("Ferguson") in view of U.S. Patent No. 6,643,652 to Helgeson et al. ("Helgeson") and in further view of U.S. Patent No. 6,088,717 to Reed et al. ("Reed"). Further, the Office action rejected claims 1-24 under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim that which the applicants regard as their invention. Finally, the Office action rejected claims 23 and 24 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree.

By present amendment, claims 1, 10, 15, 16, 21, and 23 have been amended for clarification and not in view of the prior art. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed to a robust and efficient service-to-service communications protocol that may handle change information in an identity-centric data access architecture. The system may maintain a role-based relationship for each and every user of each and every service. Thus, when data is changed at

In re Application of WHITE et al.
Serial No. 10/033,177

one service, the change data may be published to other services such that other users of these other services can be made aware of such changes if certain users of the other services have a role defined as a subscriber of change data from the first service. In order to facilitate the exchange of change data between services, a communications protocol may be used because the manner in which each service typically stores data is different from service to service, *i.e.*, an email data construct is different from a calendar appointment data construct.

In one implementation, a "publisher" refers to the service which is the source of the data, while a "subscriber" refers to the service that receives the data. The publisher and subscriber may maintain updated information about each other's users in order to accomplish selective data communication and filtering. As a result, this system may be able to determine that at least one user of the second service has a role that is a subscriber role of change data in relation to at least one user of the first service and may also be able to communicate the change data of the first service to the second service using a service-to-service communications protocol.

In an example, Bob and Judy may both choose to use services to maintain data and both may choose to maintain data about Bob (*i.e.*, phone number address, *etc.*) Bob will use a first service to maintain data about himself and Judy will use a second service to maintain data about Bob. Further, each service may include security such that only Bob can get into Bob's service and maintained data at his service and only Judy can get into her service and her maintained data about Bob. Then, Bob's service may be established as a publisher of change information

In re Application of WHITE et al.
Serial No. 10/033,177

with respect to Judy's service (but not others) and Judy's service may be established as a subscriber of change data with respect to Bob's service (but not others. As a result, when Bob changes his data via his service (the first service), then Judy's service (the second service) is automatically communicated the change information via a service-to-service protocol because of the relationship established between the services. Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

§101 Rejections

The Office action rejected claims 23 and 24 as being directed to non-statutory subject matter. Applicants respectfully disagree and submit that the claims are directed toward a method capable of being carried out in a computer, *e.g.*, a computer-implemented method or computer system that is embodied in a computer-readable medium. MPEP § 2106(IV)(B)(1) specifically states that "a claimed computer readable medium encoded with a data structure *defines* (emphasis added) structural and functional interrelationships between the data structure and the medium which permit the data structure's functionality to be realized, and is thus statutory." In contrast, MPEP § 2106(IV)(B)(1a) goes on to state further "[d]ata structures *not claimed as embodied in computer-readable media* (emphasis added) are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer."

In re Application of WHITE et al.
Serial No. 10/033,177

Claim 23 recites a computer-implemented method which is clearly within the confines of software embodied in a computer-readable medium operable to be manipulated by a computer. The computer-implemented method comprises maintaining data in a first and second service and manipulating said data based on changes. Even if these recitations are somehow considered software, the execution of the method on a client machine and a server machine still imparts functionality to the computer-implemented method. When functional descriptive material is recorded on some computer-readable medium, e.g. a computer-implemented method, it becomes structurally and functionally interrelated to the medium and will be statutory since use of technology permits the function of the descriptive material to be realized. See, for example, *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *In re Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim).

Notwithstanding this, claim 23 has been amended to recite a tangible computer-readable medium which remains consistent with the discussion above and the specification of the present invention. Despite, the Office action's objection to the concept of signals or carrier waves being addressed in the specification, applicants point out that these signals still are embodied in some tangible computer-readable medium at some point in time, such as is the case when they are created from a transmitter or received into a memory. For at least these

In re Application of WHITE et al.
Serial No. 10/033,177

reasons, applicants submit that claims 23 and 24 are directed to statutory subject matter.

Rejections under §112

Claims 1, 10, 15, 16, 21, and 23 have been amended to obviate any §112 concerns identified in the Office action.

§103 Rejections

Turning to the claims, amended claim 1 recites in a computer network, a system comprising, a first service for providing access to data based on an associated identity of each user, the first service having at least one user maintaining data therein, a second service for providing access to data based on an associated identity of each user, the second service having at least one user maintaining data therein about the at least one first user that is maintaining data on the first service, and a communications mechanism configured to exchange information between the first service and the second service, the first service configured as a publisher of change data made by users via the first service, and the second service configured as a subscriber of the change data, the communications mechanism operable to determine that the at least one user of the second service has a role that is a subscriber role of change data in relation to the at least one user of the first service and operable to communicate the change data of the first service to the second service using a service-to-service communications protocol.

In re Application of WHITE et al.
Serial No. 10/033,177

The Office action rejected claim 1 as being unpatentable over Ferguson in view of Helgeson and in further view of Reed. More specifically, the Office action contends that Ferguson teaches a first service for providing access to data based on an associated identity of each user. Column 11, lines 10-26 and column 12, lines 23-27 of Ferguson are referenced. Further, the Office action contends that Ferguson teaches a second service for providing access to data based on an associated identity of each user. Again, column 11, lines 10-26 and column 12, lines 23-27 of Ferguson are referenced. Still further, the Office action contends that Ferguson teaches a communications mechanism configured to exchange information between the first service and the second service. Column 11, lines 10-26, and column 28, lines 53-67 of Ferguson are referenced. Further yet, the Office action contends that Ferguson teaches that the first service configured as a publisher of change data made by users via the first service, and the second service configured as a subscriber of the change data, the communications mechanism communicating change information of the first service to the second service using a service-to-service communications protocol. Column 11, lines 10-26, column 24, lines 55-67, column 25, lines 1-5, and column 28, lines 53-57 of Ferguson are referenced.

The Office action acknowledges that Ferguson does not teach determining that at least one user of the second service has a role that is a subscriber role of change data in relation to at least one user of the first service as is recited in claim 1. However, the Office action contends that Helgeson does teach this recitation as recited in claim 1. Further, the Office action concedes that neither

In re Application of WHITE et al.
Serial No. 10/033,177

Ferguson, nor Helgeson teaches a first service having at least one user maintaining data therein and a second service having at least one user maintaining data therein about the at least one user. However, the Office action contends that Reed does teach this recitation. The Office action concludes that the recitations of claim 1 would have been obvious to a person skilled in the art at the time the invention was made to combine the teachings of Ferguson with the teachings of Helgeson and Reed for the purpose of providing reliable monitoring of changes to data in external systems. Applicants respectfully disagree with this unsupported conclusion.

To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01.

Applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. In specific, not all of the recitations of claim 1 are taught or suggested by the prior art of record in addition to an impermissible combination at law of the cited references. These reasons are discussed below.

In re Application of WHITE et al.
Serial No. 10/033,177

Ferguson is directed, generally, toward an online editing system for creating services having any number of subservices capable of communicating data between these subservices. Different services may communicate data back and forth when various updates and changes are made to files maintained at one or more services. As was correctly acknowledged by the Office action, Ferguson does not teach determining that at least one user of the second service has a role that is a subscriber role of change data in relation to the at least one user of the first service. As is discussed below, Helgeson does not teach this recitation either.

Helgeson is directed, generally, to a system and method for managing data exchanges in a networked computer system. More specifically, the cited and applied sections of Helgeson teach a notification manager that will notify users via a Change Manager using a communication medium such as email or electronic pages to identify that a change has occurred to a monitored object. In fact, all the subscribers of change data related to the monitored object are notified whenever any change to the object occurs. However, there is no teaching of the change data notification relating to a particular user. Thus, any change that occurs to the monitored object will be reported to all subscribers regardless of what entity is making the change to the object. There is no specific relationship between users (i.e., Judy subscribing to changes made by Bob to Bob's maintained data) and, therefore, this is not the same as the recitation in claim 1.

Reed does not cure this deficiency. Reed teaches, generally, a communications system for providing users the ability to transfer data between two computer systems. In specific, figure 1 shows two computers (a provider computer

In re Application of WHITE et al.
Serial No. 10/033,177

and a consumer computer) wherein data about providers may be stored in a provider database on a provider computer and data about consumers may stored in a consumer database on the consumer computer. The Office action cites this as an example of a teaching of a first service having at least one user maintaining data therein and a second service having at least one user maintaining data therein about the at least one user. This relationship is simply not shown in the context of the present invention by the teachings of Reed.

In terms of claim 1, no prior art of record teaches or suggests a communications mechanism that is operable to determine that the at least one user of the second service has a role that is a subscriber role of change data in relation to the at least one user of the first service and operable to communicate the change data of the first service to the second service using a service-to-service communications protocol. Although the Office action maintains that Helgeson teaches this, the subscriber role taught by Helgeson is merely in relation to the monitored object and not in relation to another user.

Furthermore, claim 1 recites that the first service is associated with at least one user that maintains data therein and the second service is associated with at least one second user that also maintains data therein. As acknowledged by the Office action, neither Ferguson nor Helgeson teaches two different services that maintain data therein associated with two different users such that the services maintain a subscriber/publisher role with each other while also in specific relation to each respective user of the services.

In re Application of WHITE et al.
Serial No. 10/033,177

This deficiency is not remedied by the teachings of Reed as contended by the Office action. Reed may teach that two different databases maintain data about two different users of the system (*i.e.*, consumers and providers), but the similarity stops there. Reed does not teach a relationship between the databases wherein updates to one database may trigger an update to another database. That is, Reed does not teach a second service having at least one user maintaining data therein about the at least one user that is maintaining data on a first service as recited in claim 1. In fact, no prior art of record, whether considered individually or in any permissible combination at law teach or suggests the concept of two separate users of two separate services for maintained data about one of the users such that the other user may receive updates to the maintaining data when the initial user (*i.e.*, the user associated with the data being maintained by both the first and second services) changes the data.

Not only does the prior art of record fail to teach or suggest all of the recitations, applicants submit that the motivation to combine the teachings of the prior art is flawed. Applicants submit that the Examiner is using impermissible hindsight reasoning as a basis for the §103 rejections as the Office action seems to paste together disparate teachings from references directed to solving disparate problems. As a matter of law, obviousness may not be established using hindsight obtained in view of the teachings or suggestions of the applicants. *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). To guard against the use of such impermissible hindsight, obviousness needs to be determined by

In re Application of WHITE et al.
Serial No. 10/033,177

ascertaining whether the applicable prior art contains any suggestion or motivation for making the modifications in the design of the prior art article in order to produce the claimed design. The mere possibility that a prior art teaching could be modified or combined such that its use would lead to the particular limitations recited in a claim does not make the recited limitation obvious, unless the prior art suggests the desirability of such a modification. See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Thus, for at least the foregoing reasons, applicants submit that claim 1 is allowable over the prior art of record whether considered individually or in any permissible combination at law.

Applicants respectfully submit that dependent claims 2-9, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, the prior art of record, whether considered individually or in any permissible combination at law, fails to teach or suggest the recitations of claim 1 and therefore these dependent claims are also allowable. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 8 recites the system of claim 1 wherein the communications mechanism is further configured to communicate a response from the second service to the first service in response to the communicating of the change information from the first service to the second service. Nowhere in the teachings of Ferguson, Helgeson or Reed is there any response to a

In re Application of WHITE et al.
Serial No. 10/033,177

communication of change information taught or suggested, let alone a response from the second service to the first service in response to the communicating of the change information from the first service to the second service as recited in claim 8. Applicants submit that claim 8 is allowable over the prior art of record for at least this additional reason.

Turning to the next independent claim, amended claim 10 recites a method comprising: maintaining data about a user in a first service by at least one first user of the first service, maintaining data about the user in a second service by at least one second user of the second service, determining that the at least one second user of a second service has a role that is a subscriber role of change data in relation to the at least one first user of a first service, communicating data from the first service to the second service using a service-to-service communications protocol, the data including change data of at least one first user of the first service, receiving the data at the second service, and updating information at the second service based on the change data.

As noted above, the Office action rejected claim 10 as being unpatentable over Ferguson in view of Helgeson and in further view of Reed. More specifically, the Office action contends that Ferguson, Helgeson, and Reed teach the recitations of claim 10 and maintain the same rationale as presented with respect to claim 1. As before, applicants respectfully disagree with this rationale.

As was briefly discussed above, Ferguson teaches, generally, an online editing system for creating services having any number of subservices capable of communicating data between these subservices. As such, different services may

In re Application of WHITE et al.
Serial No. 10/033,177

communicate data back and forth when various updates and changes are made to files maintained at one or more services.

As also briefly discussed above, Helgeson is directed, generally, to a system and method for managing data exchanges in a networked computer system. More specifically, the cited and applied sections of Helgeson teach a notification manager that will notify users via a Change Manager using a communication medium such as email or pages to identify that a change has occurred to monitored objects. In fact, all the subscribers of change data related to the monitored object are notified whenever any change to the object occurs.

However, as acknowledged by the Office action, neither Helgeson nor Ferguson teach that the change data notification relates to a particular user. This deficiency is not remedied by the teachings of Reed as contended by the Office action. Reed may teach that two different databases maintain data about two different users of the system (*i.e.*, consumers and providers), but does not teach any relationship between the two. Reed does not teach or even suggest a relationship between the databases wherein updates to one database may trigger an update to another database. That is, Reed does not teach a second service having at least one user maintaining data therein about the at least one user that is maintaining data on a first service. In fact, no prior art of record, whether considered individually or in any permissible combination at law teach or suggests the concept of two separate users of two separate services for maintained data about one of the users such that the other user may receive updates to the

In re Application of WHITE et al.
Serial No. 10/033,177

maintaining data when the initial user (*i.e.*, the user associated with the data being maintained by both the first and second services) changes the data.

In terms of claim 10, no prior art of record teaches or suggests determining that at least one user of a second service has a role that is a subscriber role of change data in relation to the at least one user of a first service. The prior art of record teaches that the changes are in relation to a monitored object and not in relation to a user of the maintained data associated with a specific user.

Furthermore, claim 10 has been amended to further clarify that the first service is associated with at least one first user that maintains data therein and the second service is associated with at least one second user that also maintains data therein about the first user. The prior art of record does not teach two different services that maintain data therein associated with two different users about one of the users such that the services maintain a subscriber/publisher role with each other in relation to the first user's data.

In addition to the shortcomings of the prior art of record, applicants submit that the Examiner is again using hindsight reasoning as a basis for the §103 rejections which is not permissible at law. Further, if anything, the prior art references teach away from the present invention as Helgeson specifically desires to have only one change manager notifying users of changes to monitored objects for all subscribers. Thus, for at least the foregoing reasons, applicants submit that claim 10 is allowable over the prior art of record whether considered alone or in any permissible combination at law.

In re Application of WHITE et al.
Serial No. 10/033,177

Applicants respectfully submit that dependent claims 11-15, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 10 and consequently includes the recitations of independent claim 10. As discussed above, Ferguson, Helgeson, and Reed, whether considered individually or in any permissible combination at law, fail to teach or suggest the recitations of claim 10 and therefore these dependent claims are also allowable over the prior art of record. In addition to the recitations of claim 10 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 12 recites resending the data from the first service to the second service if the response is not received at the first service. Nowhere can there be found in Ferguson, Helgeson, or Reed any disclosure or suggestion of resending any data, let alone resending the data from the first service to the second service if the response is not received at the first service as recited in claim 12. Applicants submit that claim 12 is allowable for at least this additional reason.

Turning to the next independent claim, amended claim 16 recites in a computer network, maintaining data about a user in a first service by at least one first user of the first service, maintaining data about the user in a second service by at least one second user of the second service, determining that the at least one second user of a second service has a role that is a subscriber role of change data in relation to the at least one first user of a first service, receiving a change from the at least one first user at the first service, and communicating change data from a first service to a second service that subscribes to change information from the first

In re Application of WHITE et al.
Serial No. 10/033,177

service, the change data communicated automatically via a service-to-service communications protocol.

As mentioned above, the Office action rejected claim 16 as being unpatentable over Ferguson in view of Helgeson and in further view of Reed. More specifically, the Office action contends that Ferguson, Helgeson, and Reed teach the recitations of claim 16 and maintain the same rationale as presented with respect to claim 1. As before, applicants respectfully disagree with this rationale.

As was discussed above, and as acknowledged by the Office action, Ferguson does not show any teaching or even any appreciation for roles assigned to user of the services such that relationships between users may be maintained. Furthermore, as also acknowledged by the Office action, Helgeson simply does not teach or suggest determining that at least one user of a second service has a role that is a subscriber role of change data in relation to the at least one first user of a first service as recited in claim 16. Separately, Ferguson and Helgeson instead teach that the changes are in relation to a monitored object and not in relation to any user.

Reed is completely silent to the concept of maintaining relationships between users of services and does not overcome the shortcomings of the prior art of record. Claim 16 recites maintaining data about a user (which could be any user) in a first service by at least one first user of the first service and maintaining data about the user (which could be the same "any user") in a second service by at least one second user of the second service. As has been discussed above, no prior art of record, whether considered alone in with any permissible combination at

In re Application of WHITE et al.
Serial No. 10/033,177

law, teaches or suggests these recitations. Consequently, applicants submit that claim 16, as amended, is allowable over the prior art of record for at least the foregoing reasons.

Applicants respectfully submit that dependent claims 17-22, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 16 and consequently includes the recitations of independent claim 16. As discussed above, Ferguson, Helgeson, and Reed whether considered individually or in any permissible combination at law, fail to teach or suggest the recitations of claim 16 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 16 noted above, each of these dependent claims includes additional patentable elements.

Turning to the last independent claim, amended claim 23 recites a tangible computer-readable medium having computer-executable instructions for: maintaining data about a user in a first service by at least one first user of the first service, maintaining data about the user in a second service by at least one second user of the second service, determining that the at least one user of a second service has a role that is a subscriber role of change data in relation to the at least one first user of a first service, communicating data from the first service to the second service using a service-to-service communications protocol, the data including change data of at least one first user of the first service, receiving the data at the second service, and updating information at the second service based on the change data.

In re Application of WHITE et al.
Serial No. 10/033,177

The Office action rejected claim 23 as being unpatentable over Ferguson in view of Helgeson and in further view of Reed and cited the exact same sections of Ferguson, Helgeson, and Reed as were cited in the rejection of claim 1 as noted above. Applicants respectfully disagree.

As was discussed above, and as acknowledged by the Office action, Ferguson does not show any teaching or even any appreciation for roles assigned to user of the services such that relationships between users may be maintained. Furthermore, as also acknowledged by the Office action, Helgeson simply does not teach or suggest determining that at least one user of a second service has a role that is a subscriber role of change data in relation to at least one user of a first service as recited in claim 23. Separately, Ferguson and Helgeson instead teach that the changes are in relation to a monitored object and not in relation to any users.

Reed is completely silent to the concept of maintaining relationships between users of services and does not overcome the shortcomings of the prior art of record. Claim 23 recites maintaining data about a user (which could be any user) in a first service by at least one first user of the first service and maintaining data about the user (which could be the same "any user") in a second service by at least one second user of the second service. As has been discussed above, no prior art of record, whether considered individually in with any permissible combination at law, teaches or suggests these recitations. Consequently, applicants submit that claim 23, as amended, is allowable over the prior art of record for at least the foregoing reasons.

In re Application of WHITE et al.
Serial No. 10/033,177

Applicants respectfully submit that dependent claim 24, by similar analysis, is allowable. This claim depends directly from claim 23 and consequently includes the recitations of independent claim 23. As discussed above, Ferguson, Helgeson, and Reed, whether considered individually or in any permissible combination at law, fail to teach or suggest the recitations of claim 23 and therefore this claim is also allowable over the prior art of record. In addition to the recitations of claim 23 noted above, this dependent claim includes additional patentable elements.

For at least the reasons discussed above, applicants submit that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

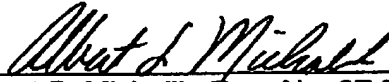
In re Application of WHITE et al.
Serial No. 10/033,177

CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-24 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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In re Application of WHITE et al.
Serial No. 10/033,177

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Response, along with transmittal, petition for extension of time, credit card payment form, and facsimile cover sheet, are being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) on the date shown below:

Date: December 15, 2005


Albert S. Michalik

3060 Fourth Amendment